

Figure 1

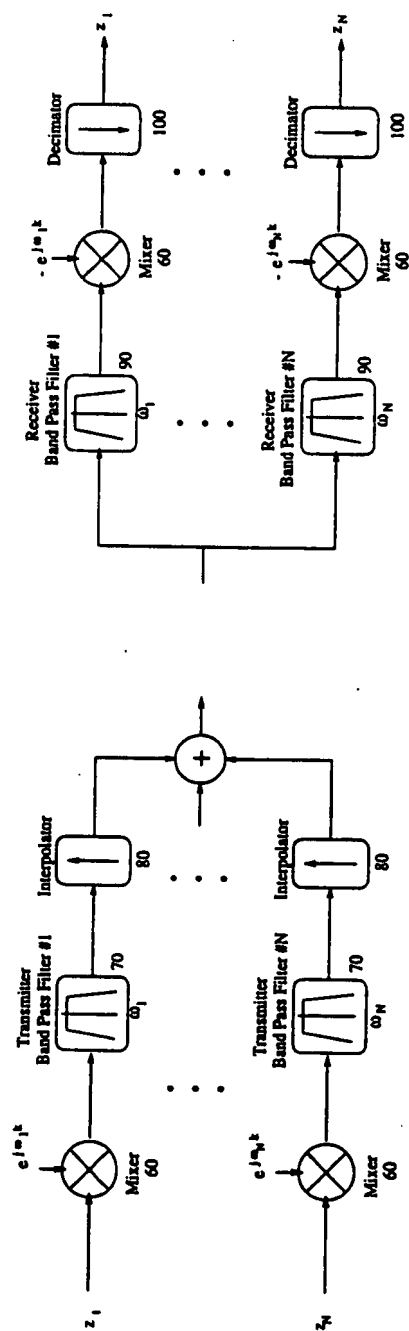
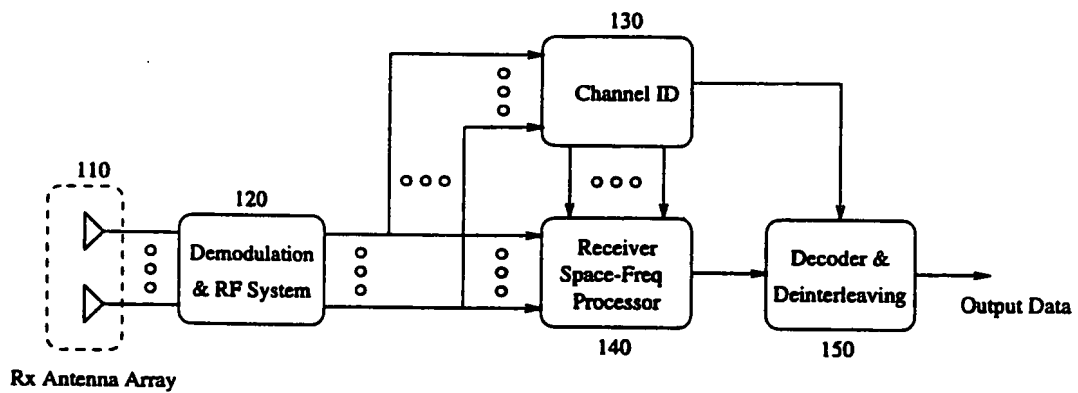


Figure 2



Multipath can be more than one reflected or refracted path in a wireless propagation channel with antenna elements that have one polarization.

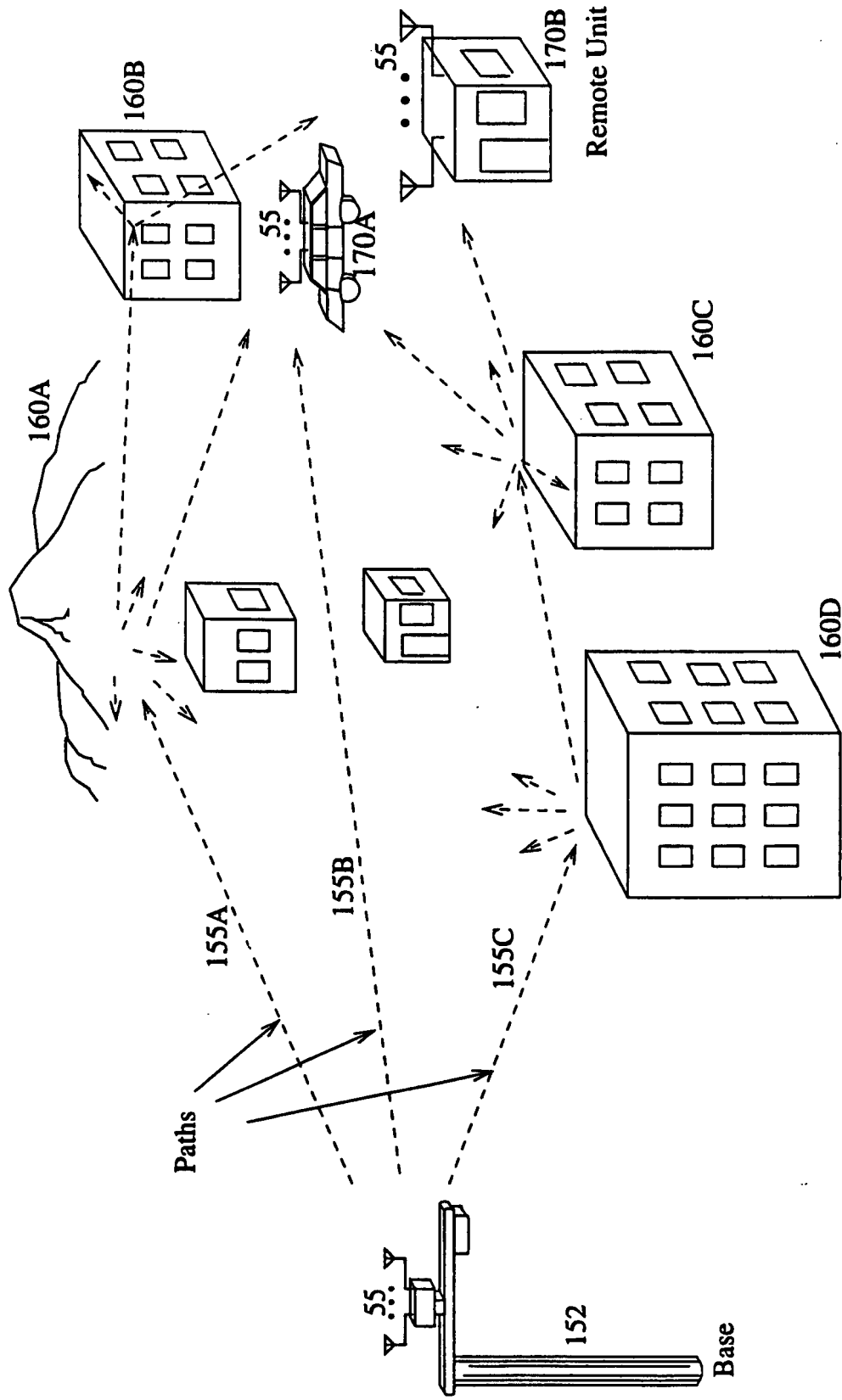


Figure 4

Multipath can be one or more paths with polarization A and one or more paths with polarization B. The two sets of paths may or may not be orthogonal.

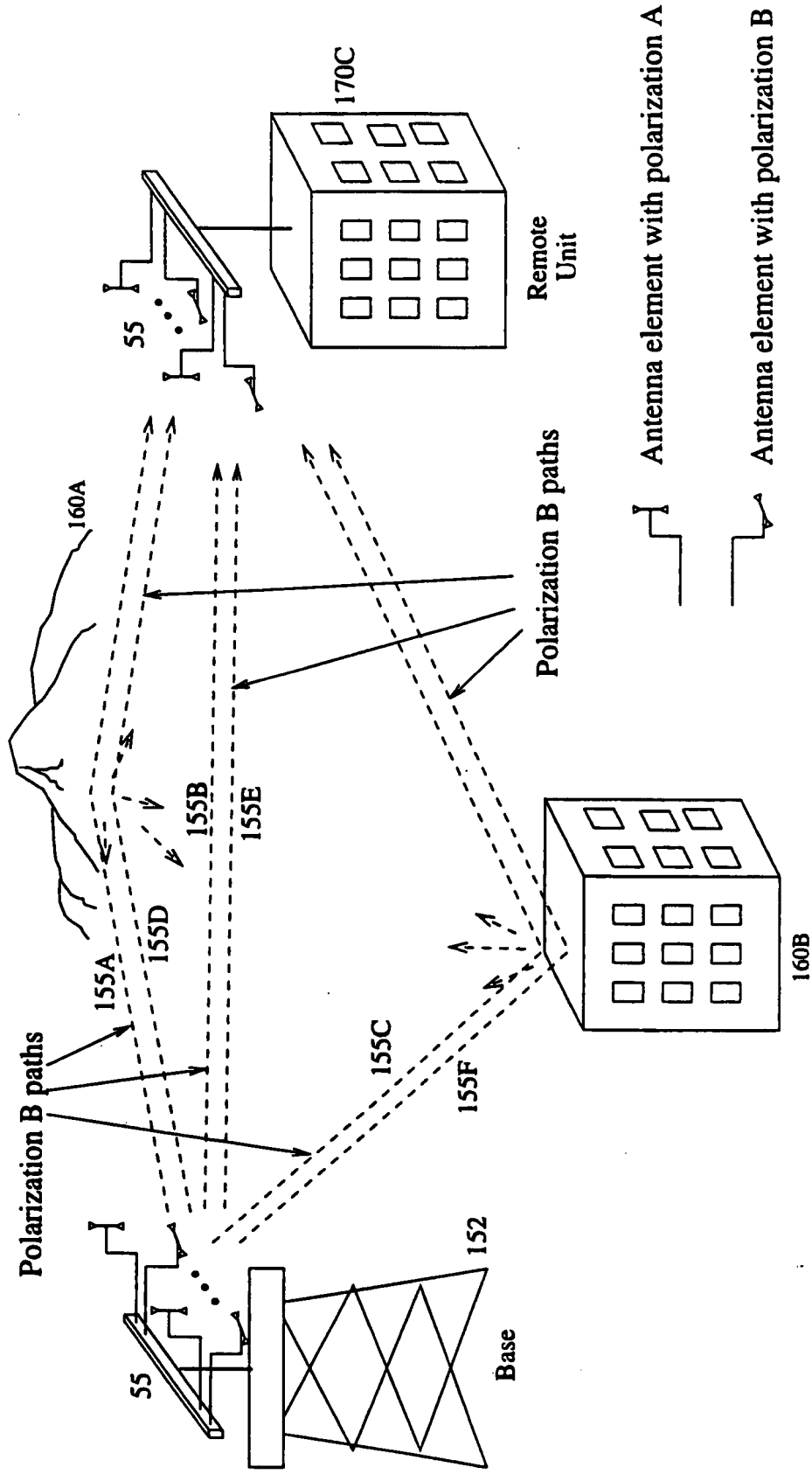
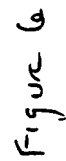


Figure 5

1. The first part of the document is a list of references. The references are listed in a vertical column on the left side of the page. The references are:
 

- 1. The first part of the document is a list of references. The references are listed in a vertical column on the left side of the page. The references are:



180A 180B 180C 180D

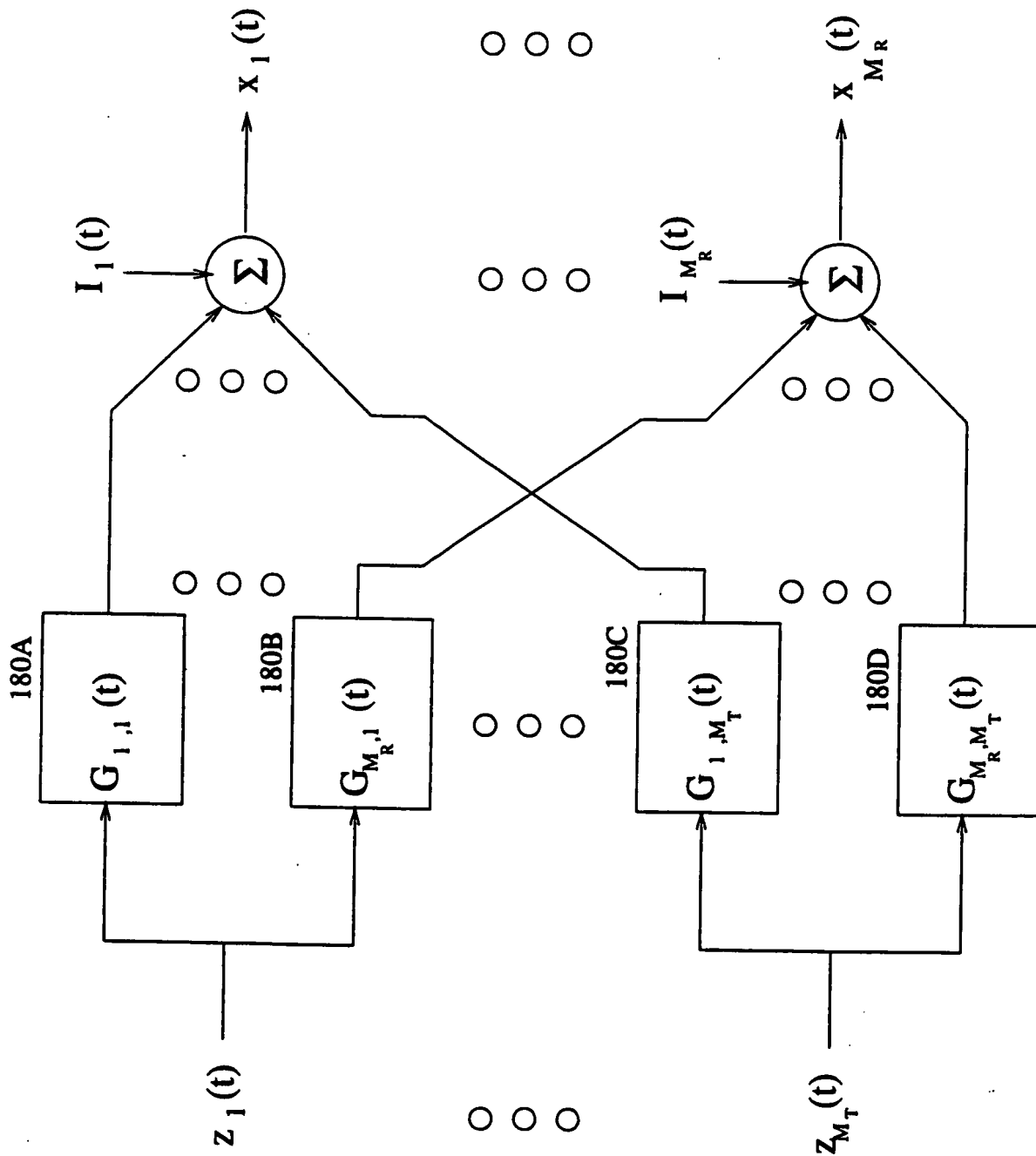


Figure 7

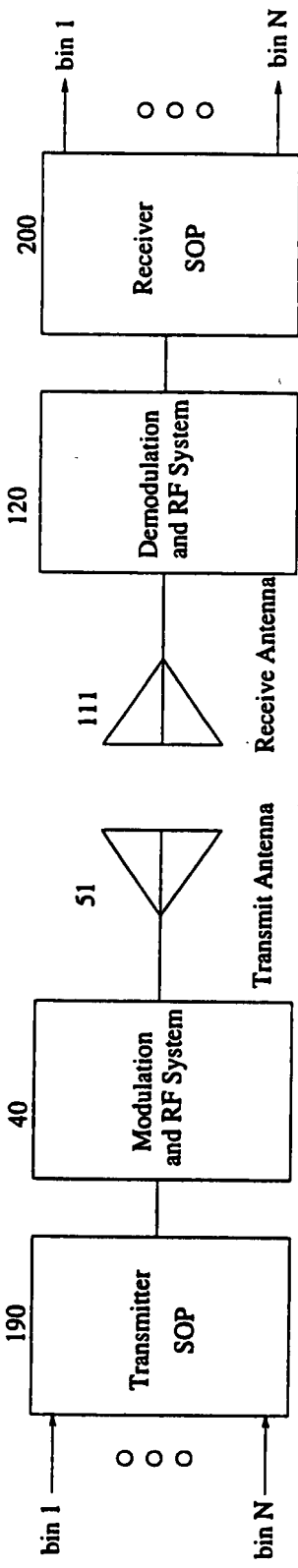


Figure 8



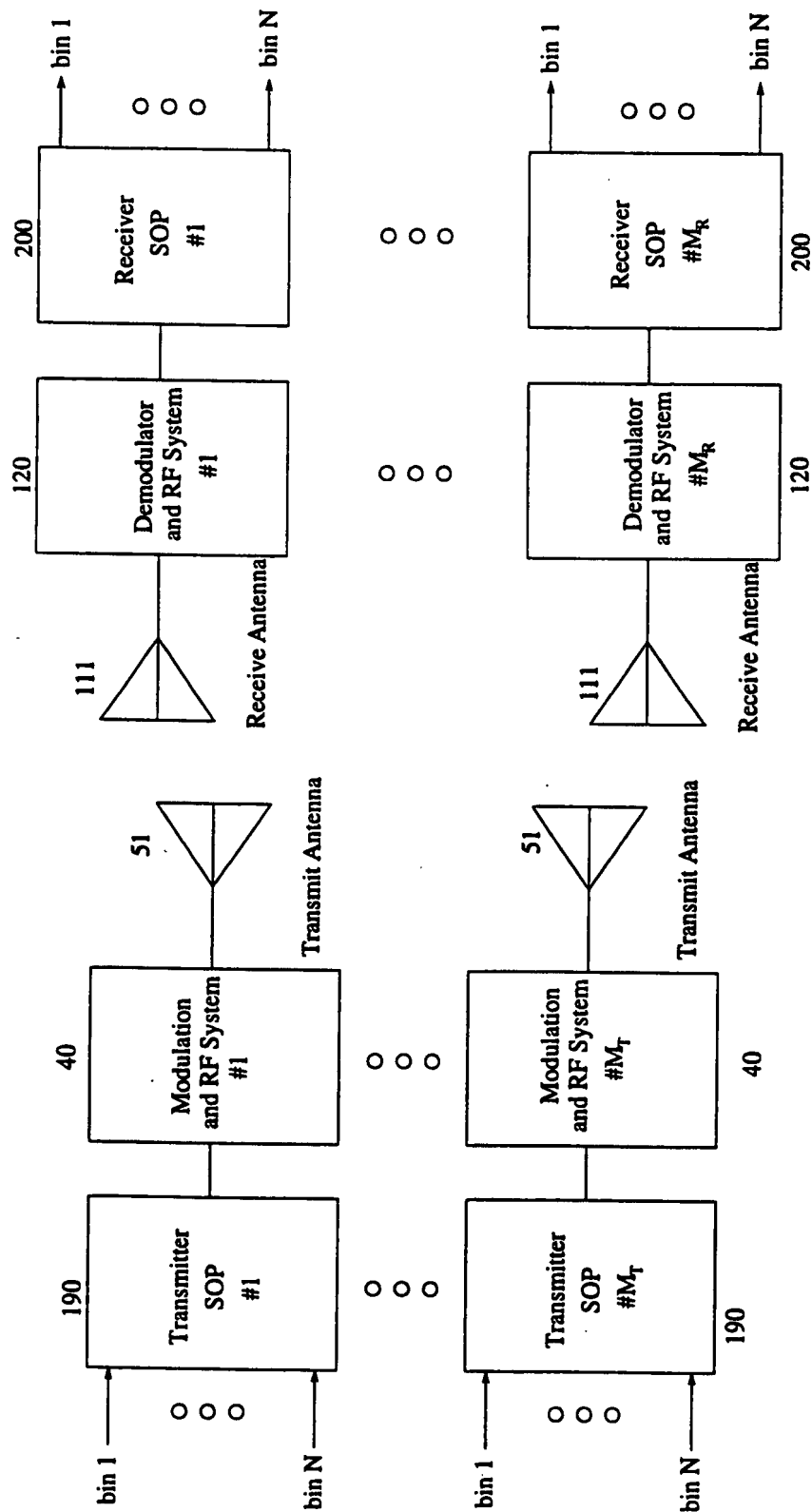


Figure 9

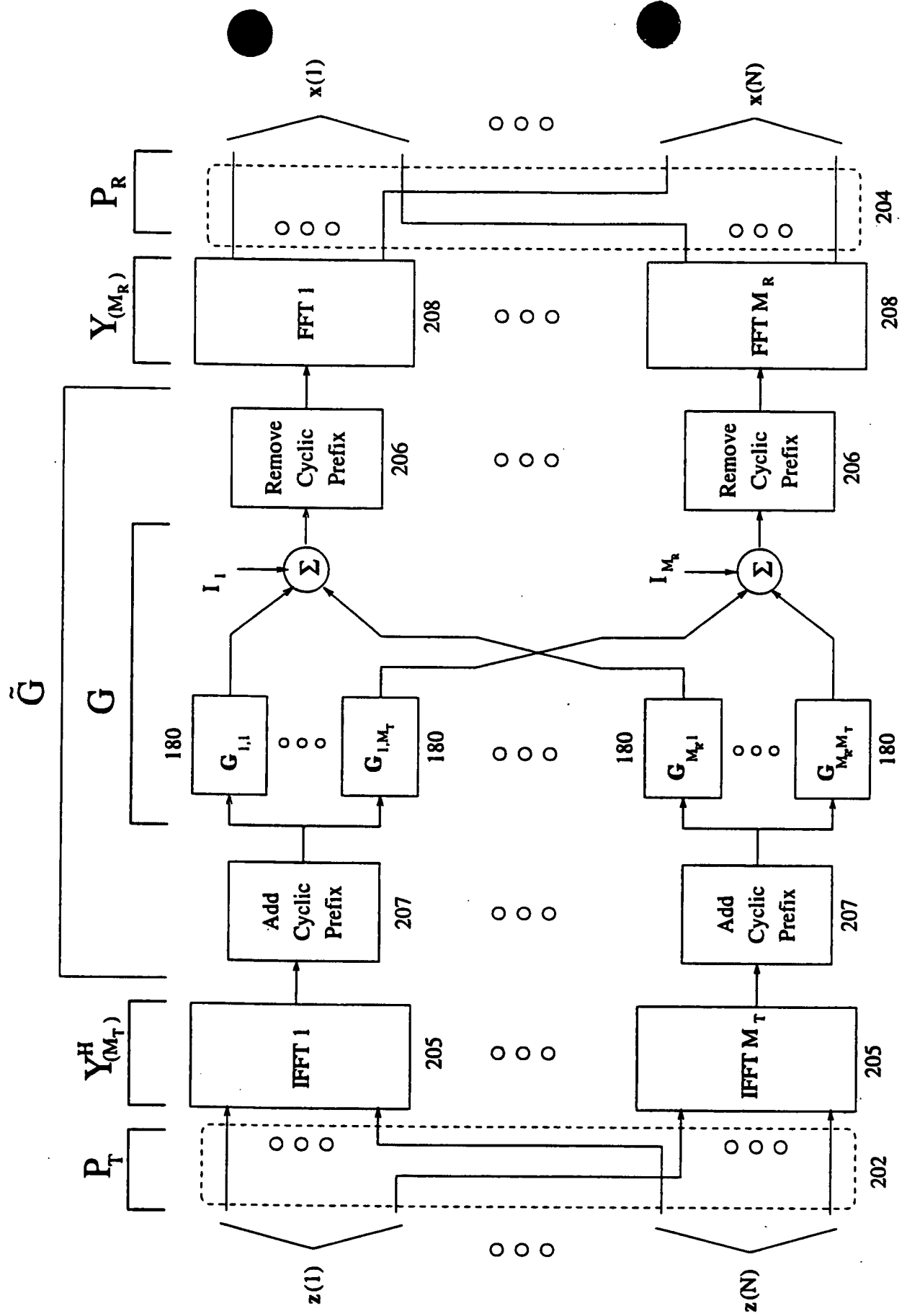
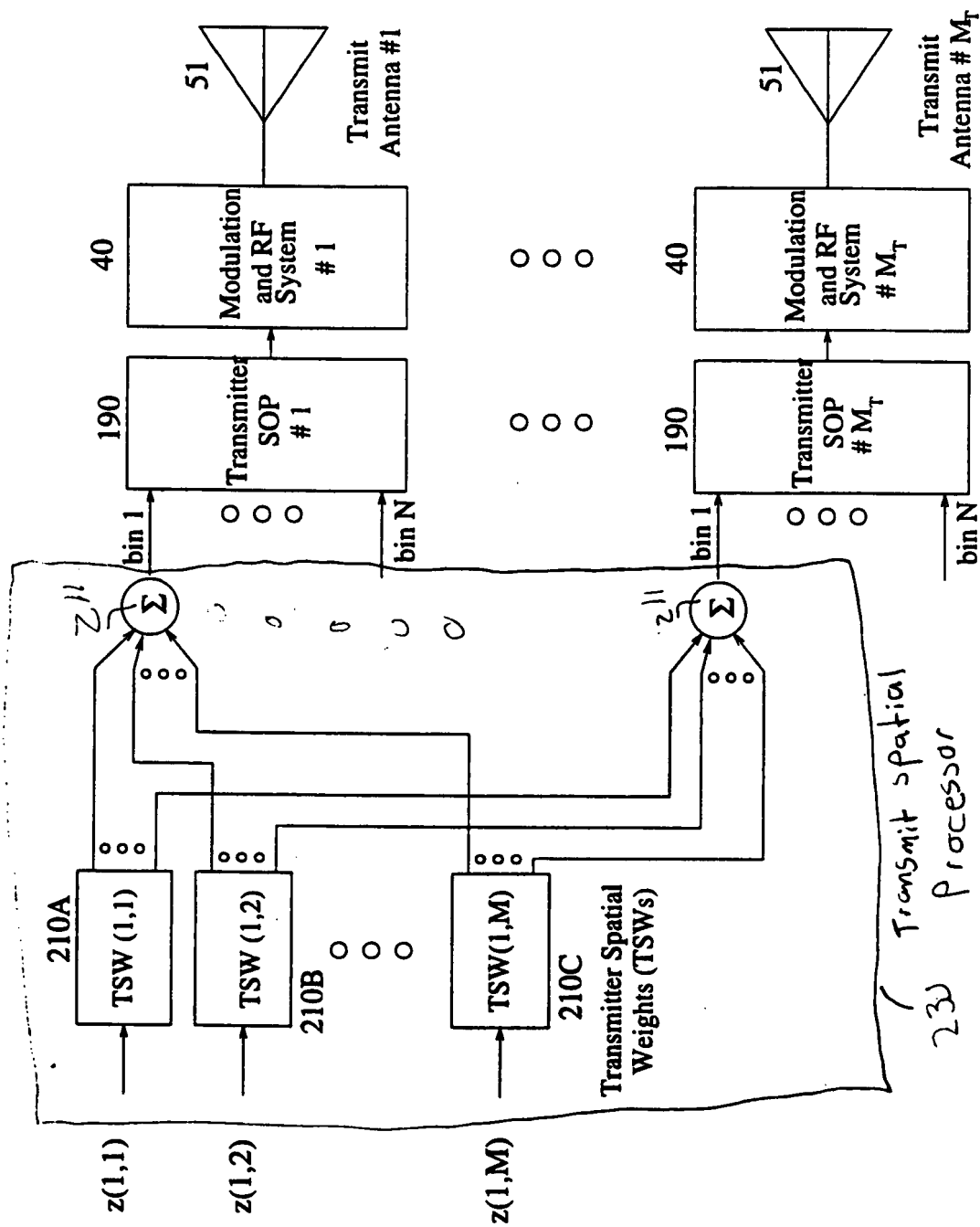


Figure 10



F. 502 11

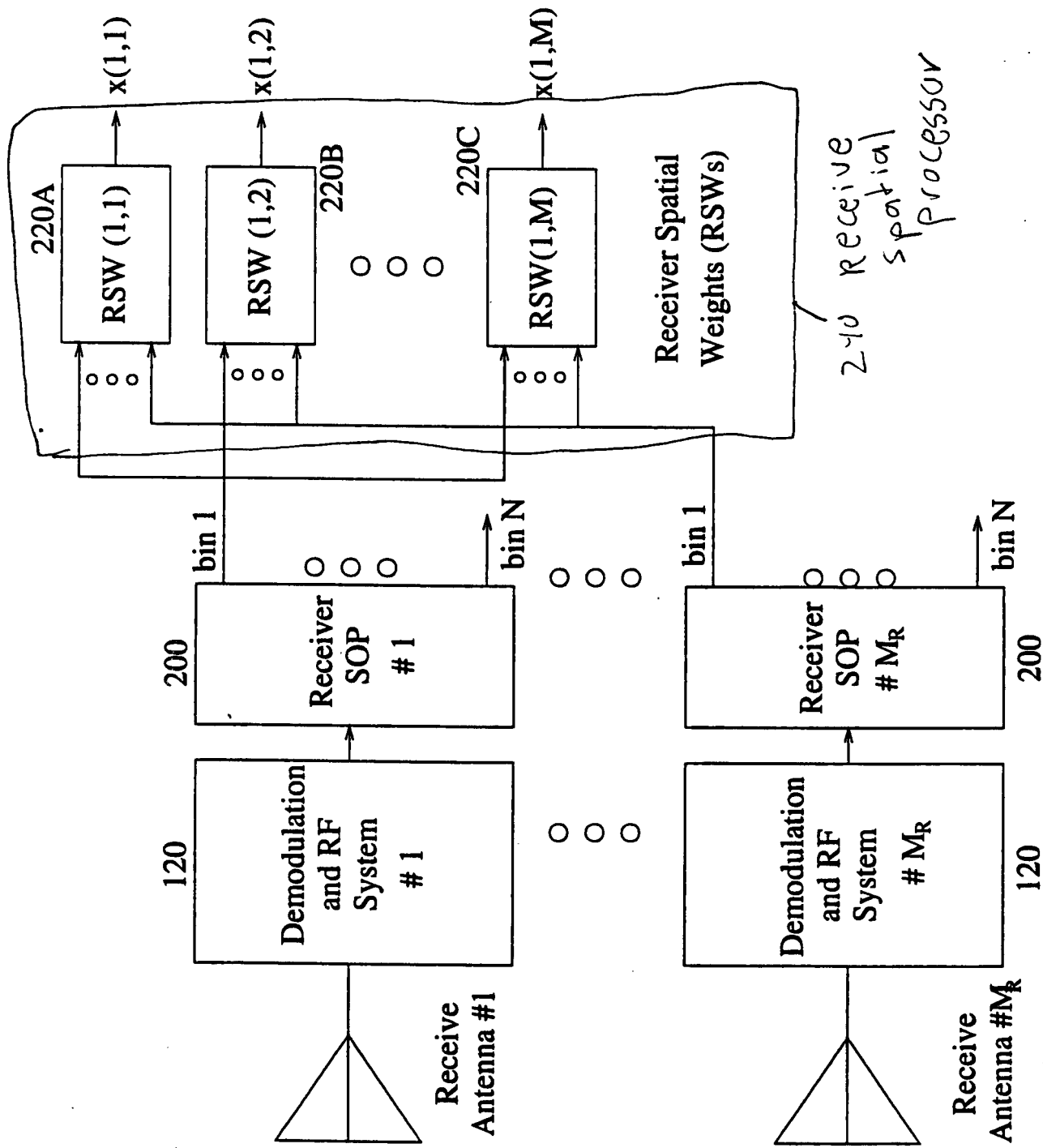


Figure 12

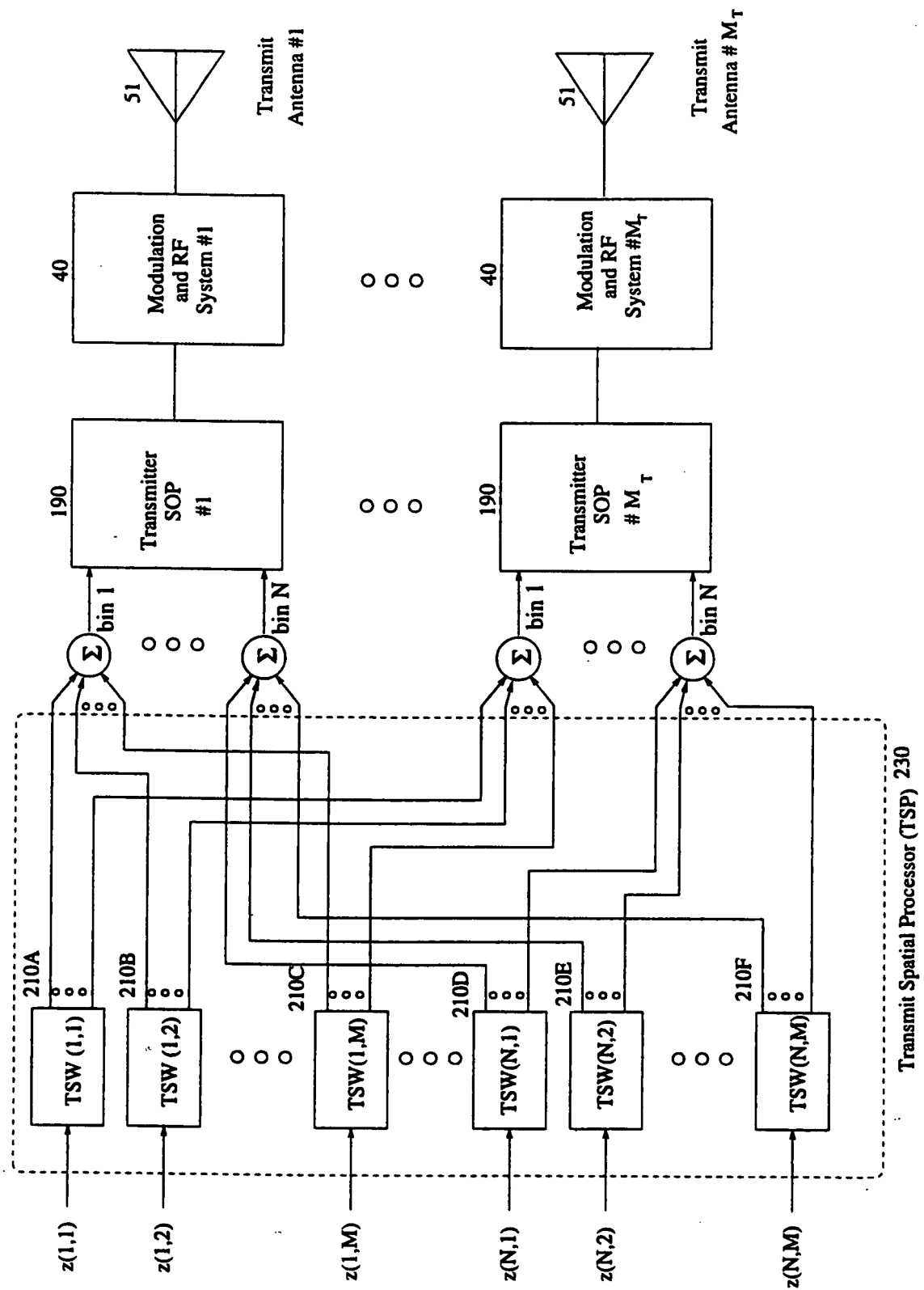


Figure 13

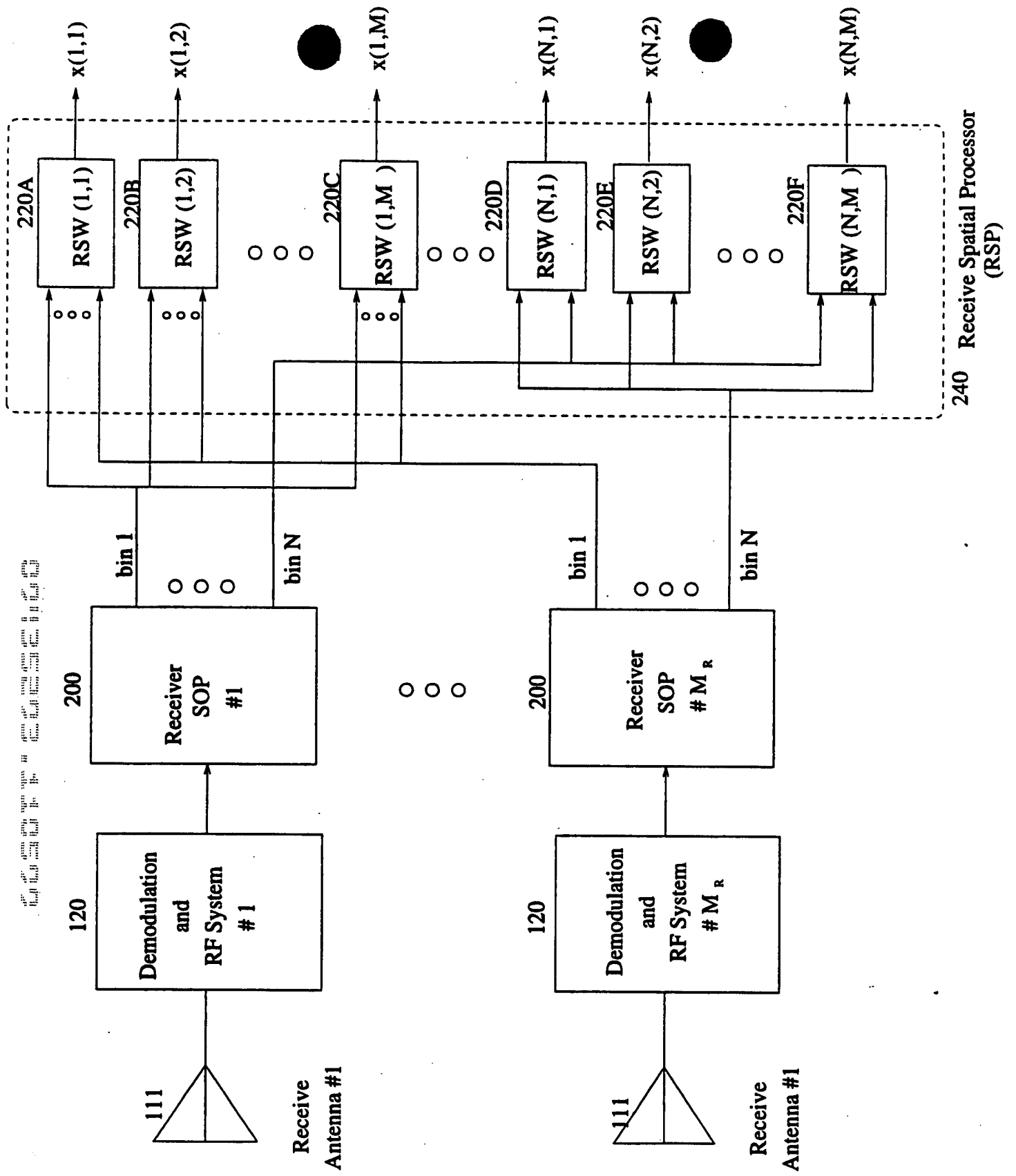


Figure 14

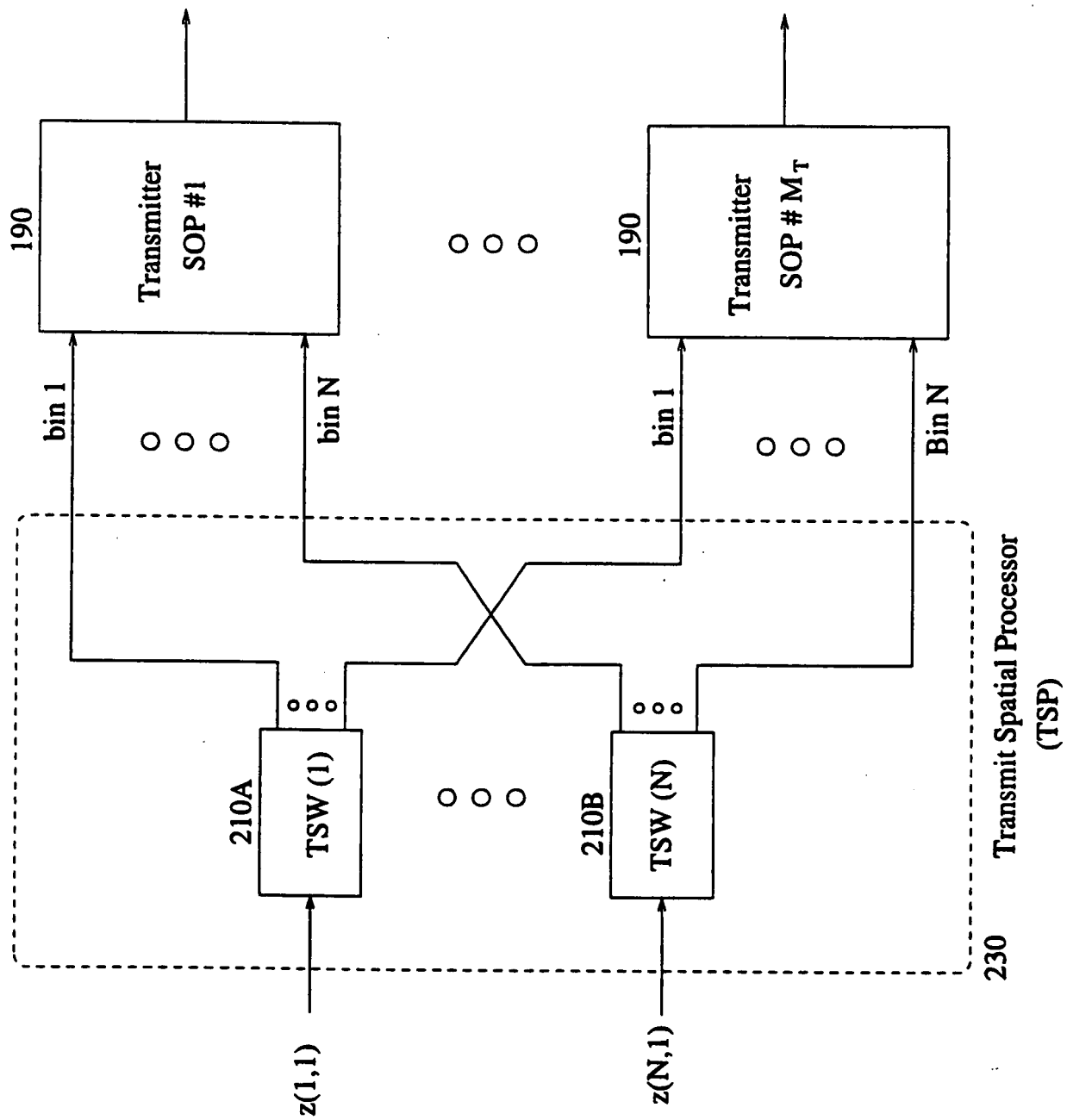


Figure 15

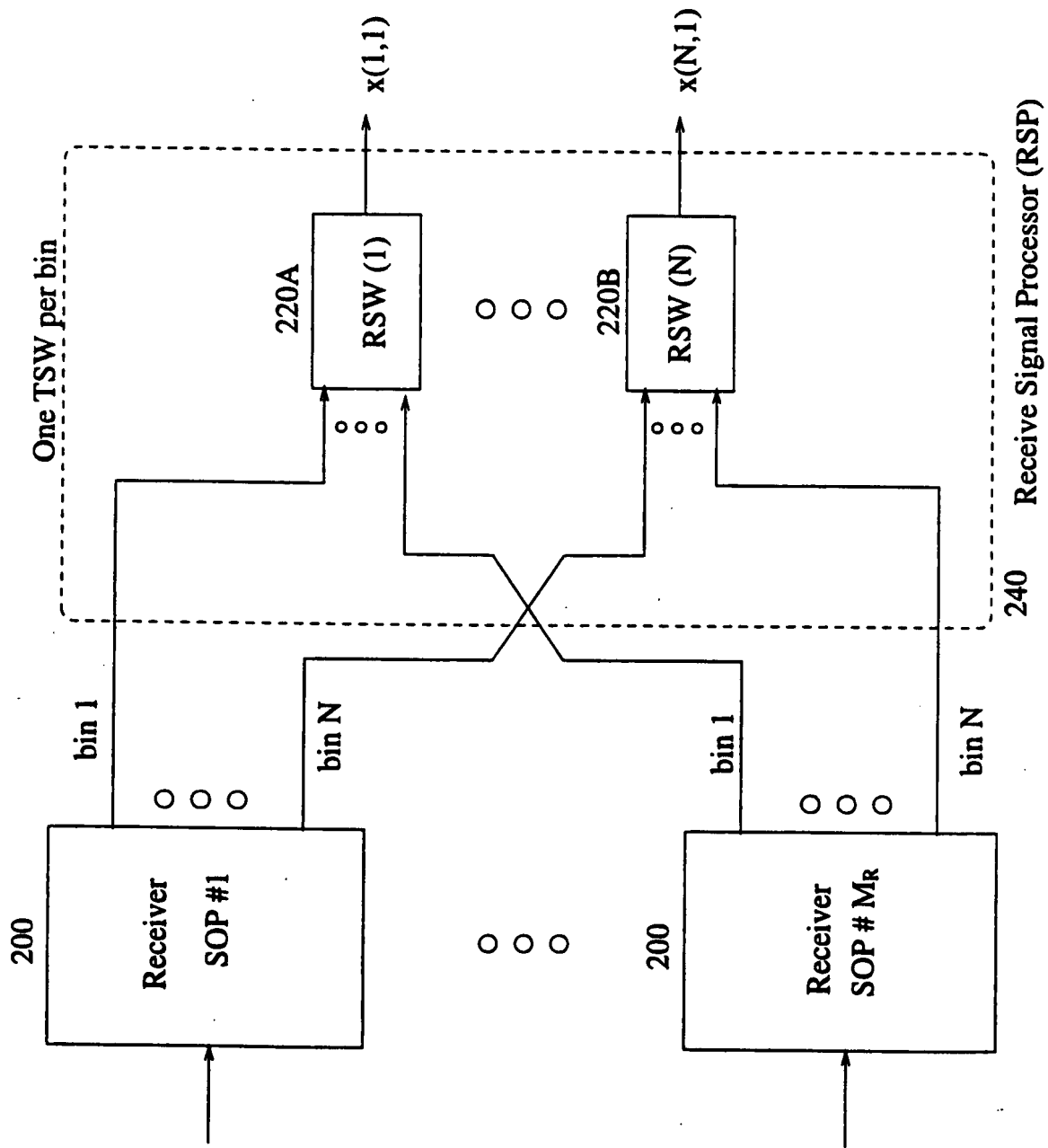


Figure 16



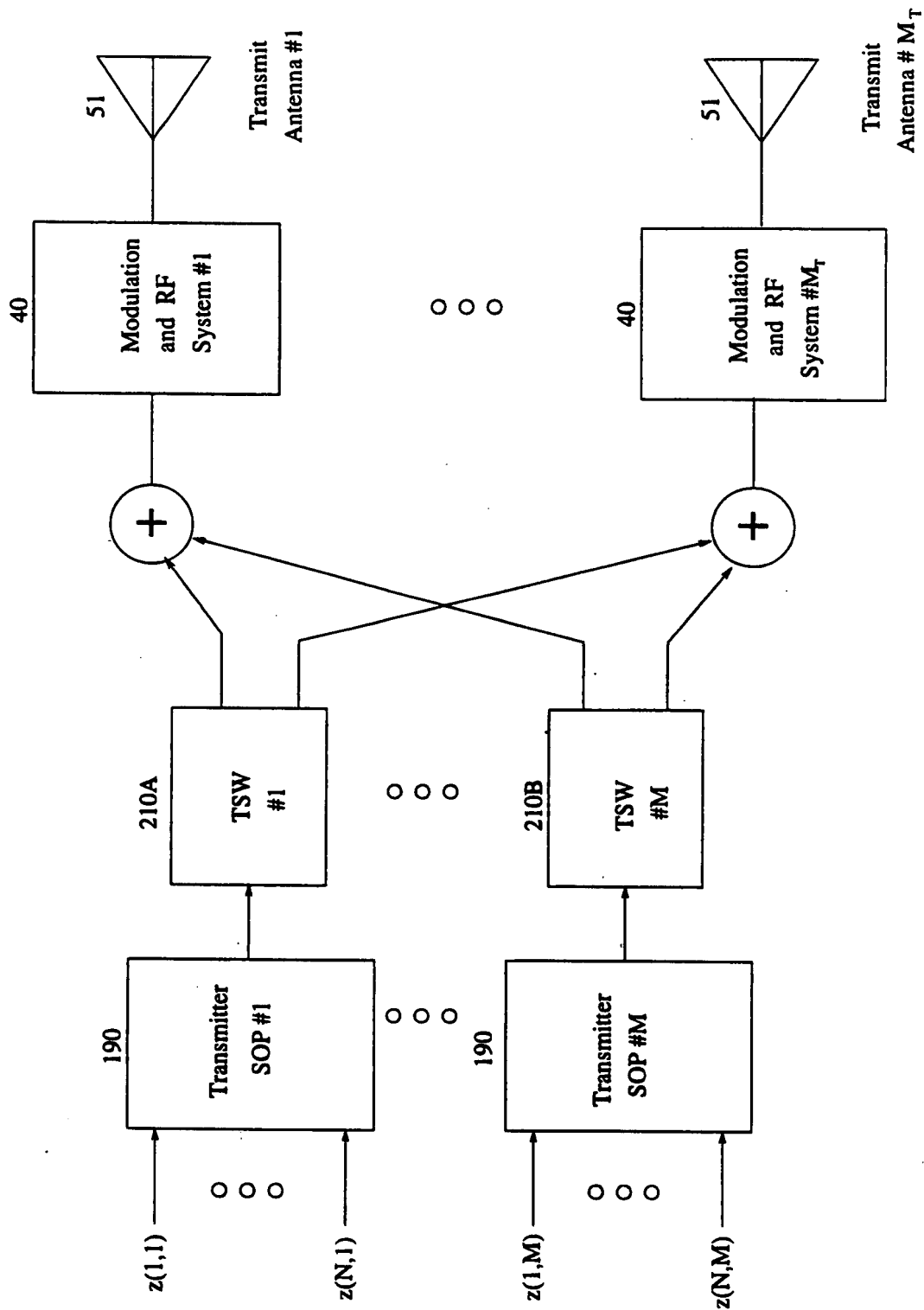


Figure 17

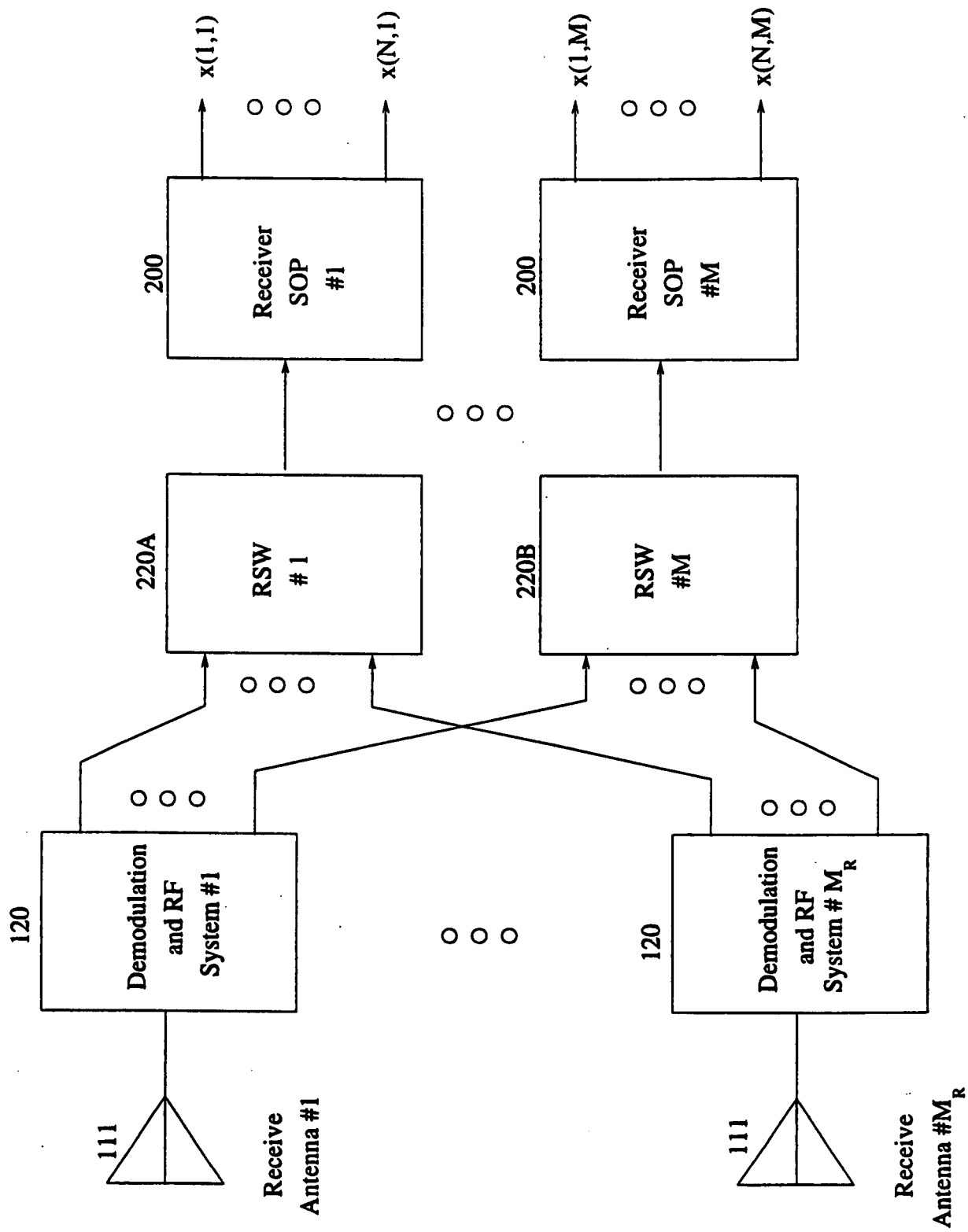


Figure 18

FIG. 19 is a block diagram of a system for processing data in a parallel manner. The system includes a data input, a plurality of parallel processing units, and a data output. The data input is connected to a first processing unit, which is connected to a second processing unit, which is connected to a third processing unit, and so on. The data output is connected to the first processing unit, which is connected to the second processing unit, which is connected to the third processing unit, and so on.

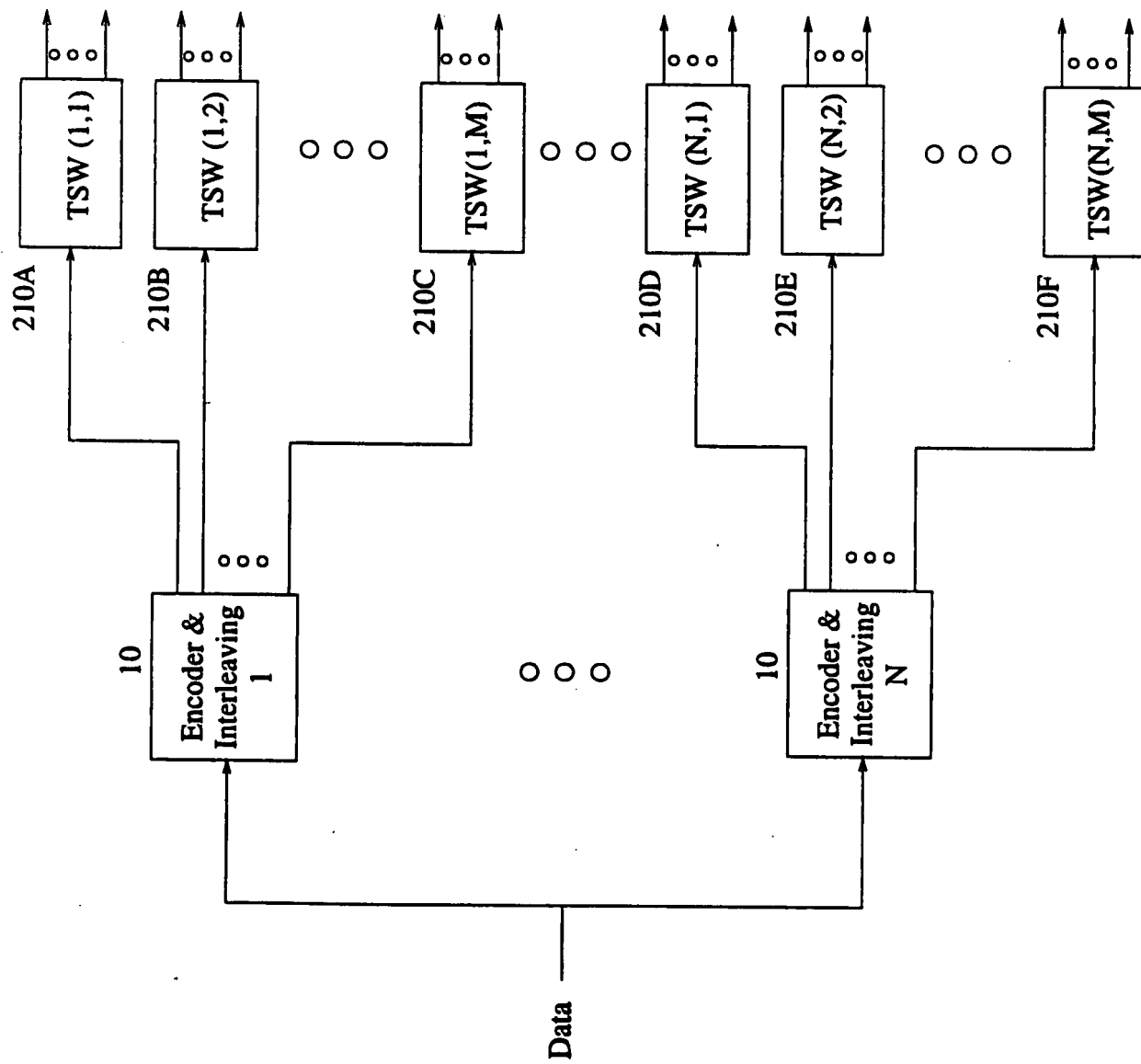


Fig. 19.

FIG. 20 is a block diagram of a transmitter system. The system includes a Data input, a series of Encoder & Interleaving blocks (1, 2, ..., M), and a series of Transmitter Spatial Weighting (TSW) blocks (1,1, 1,2, ..., 1,M, ..., N,1, N,2, ..., N,M). The Data input is connected to the Encoder & Interleaving blocks. The output of the Encoder & Interleaving blocks is connected to the TSW blocks. The TSW blocks are connected to the output of the system.

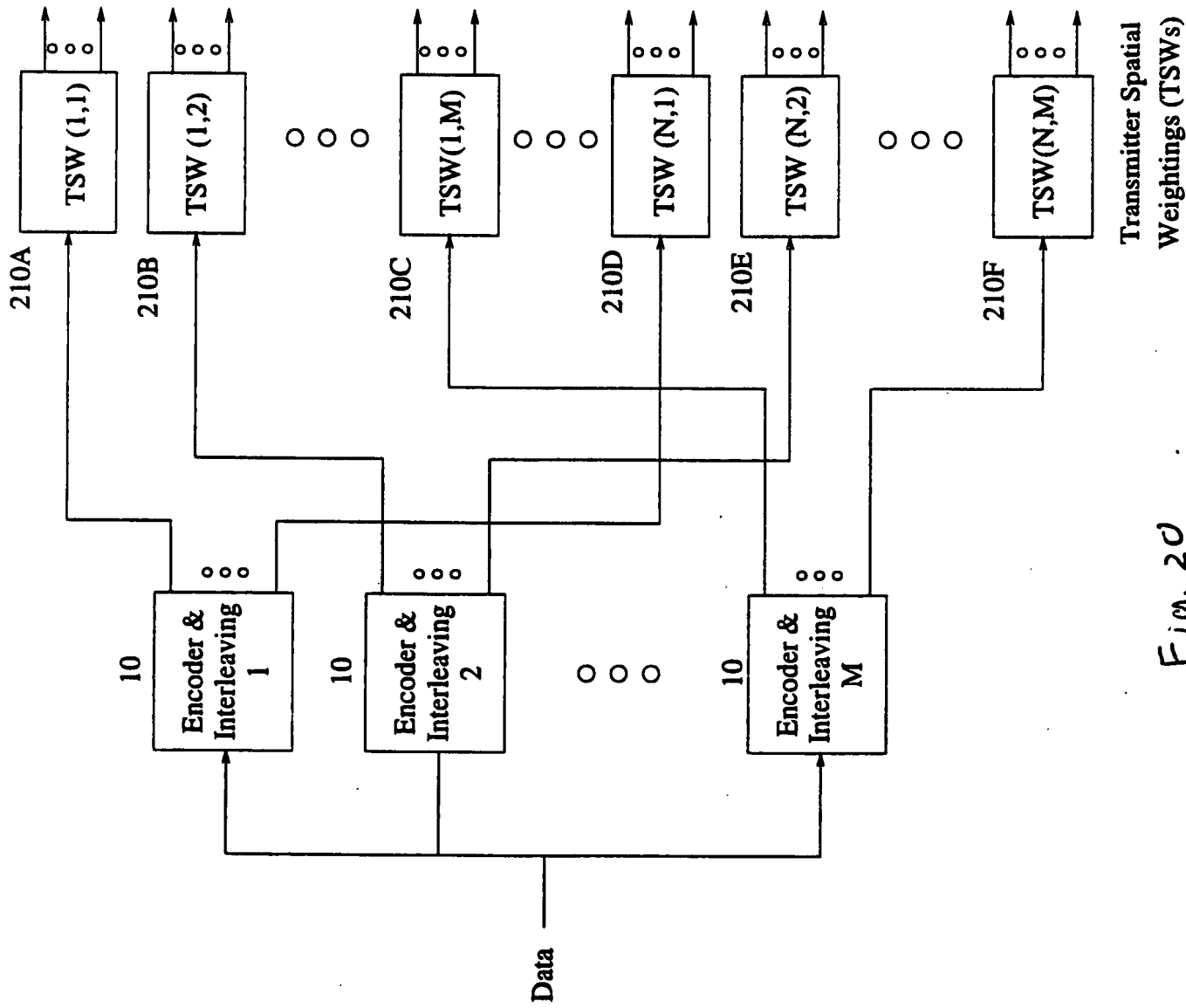


Fig. 20

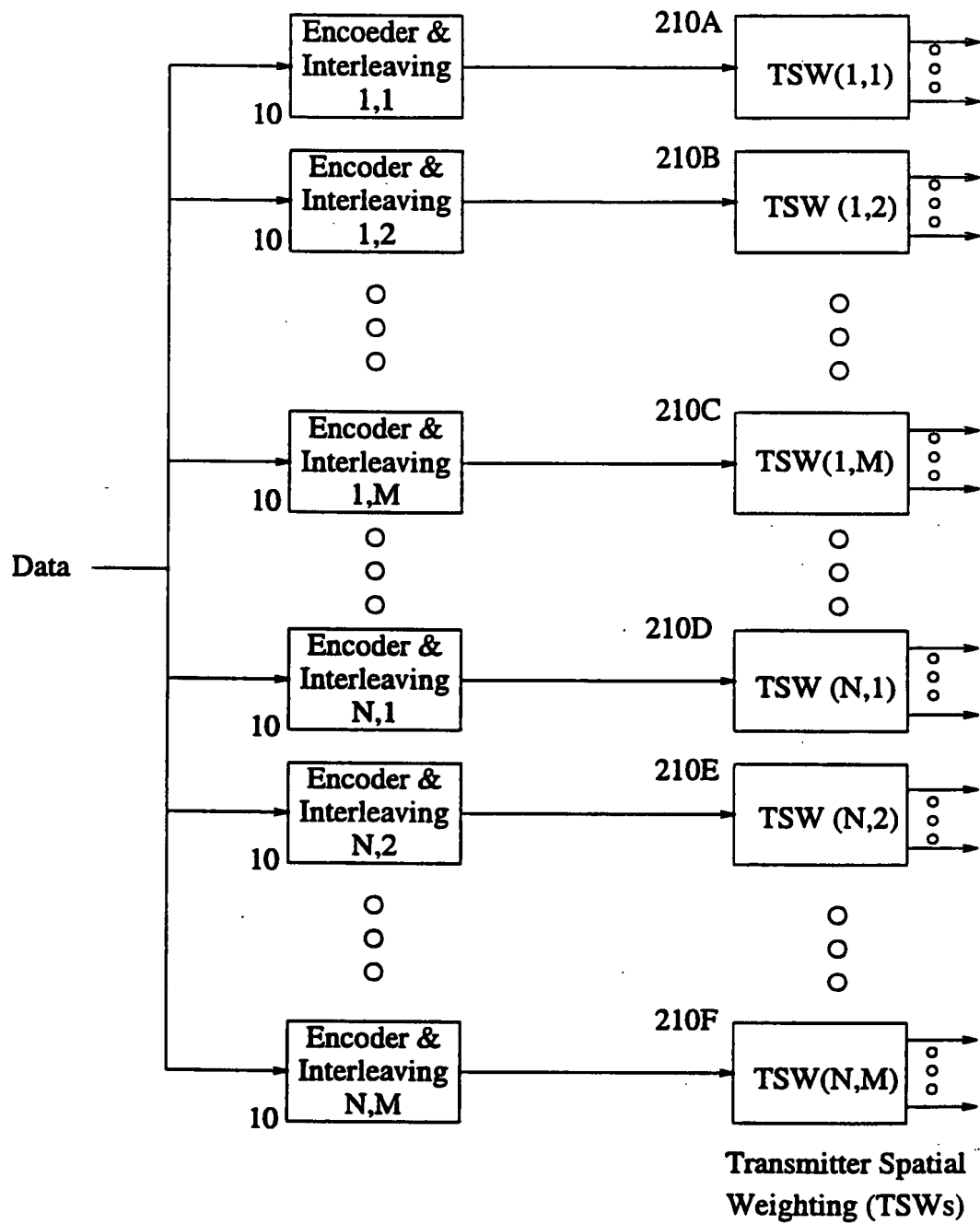


Fig. 21

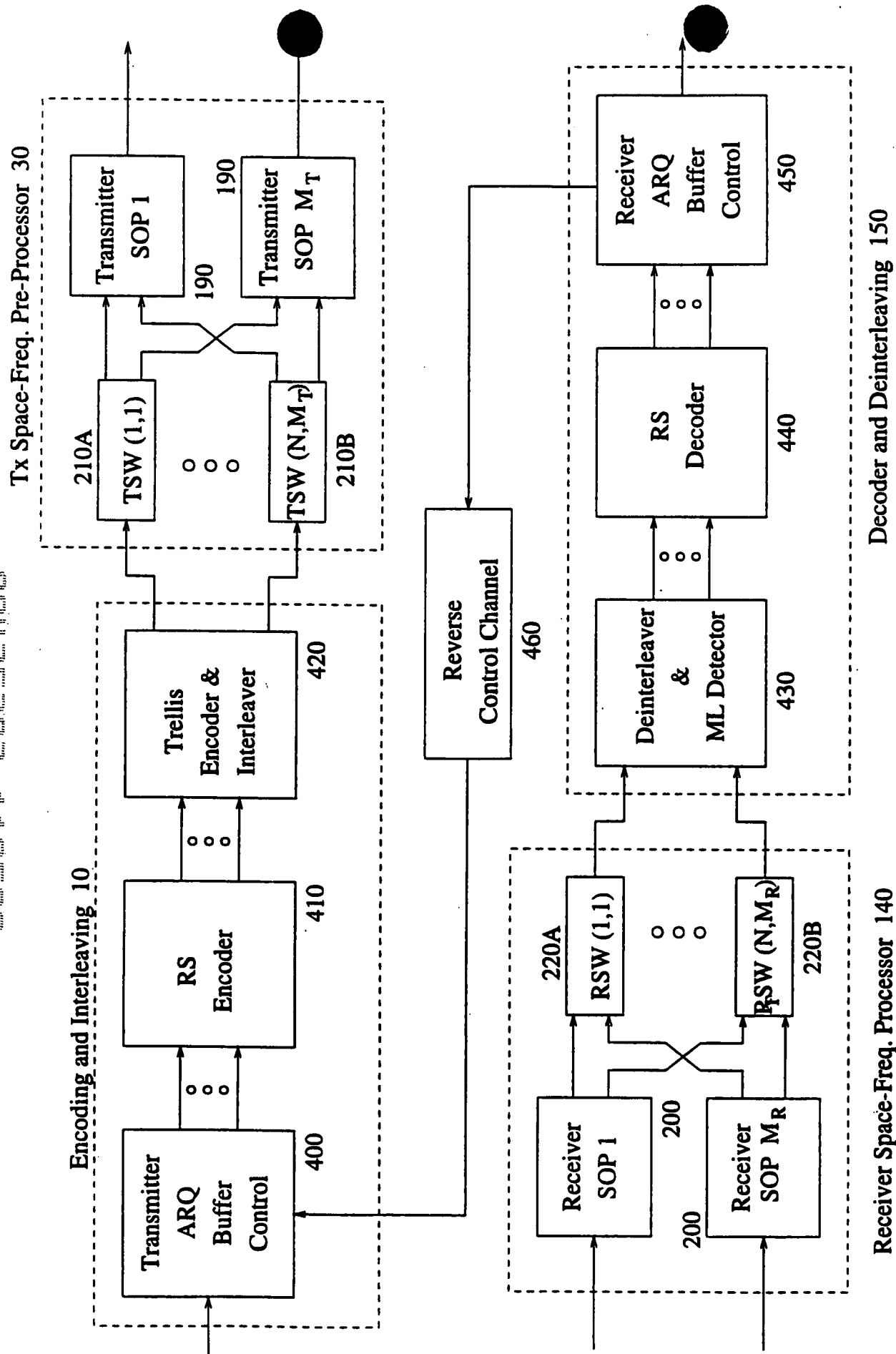


Fig. 22

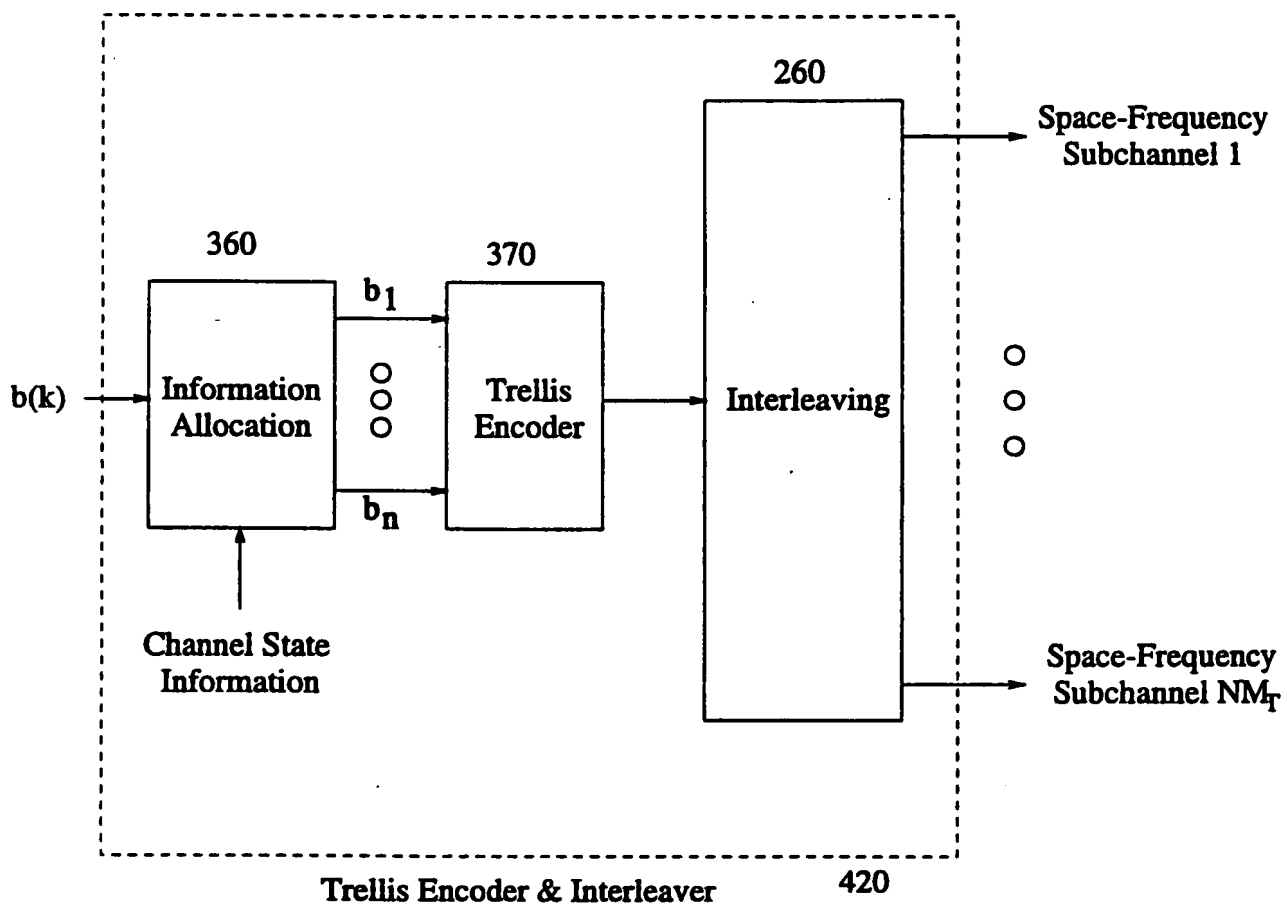


Fig. 23

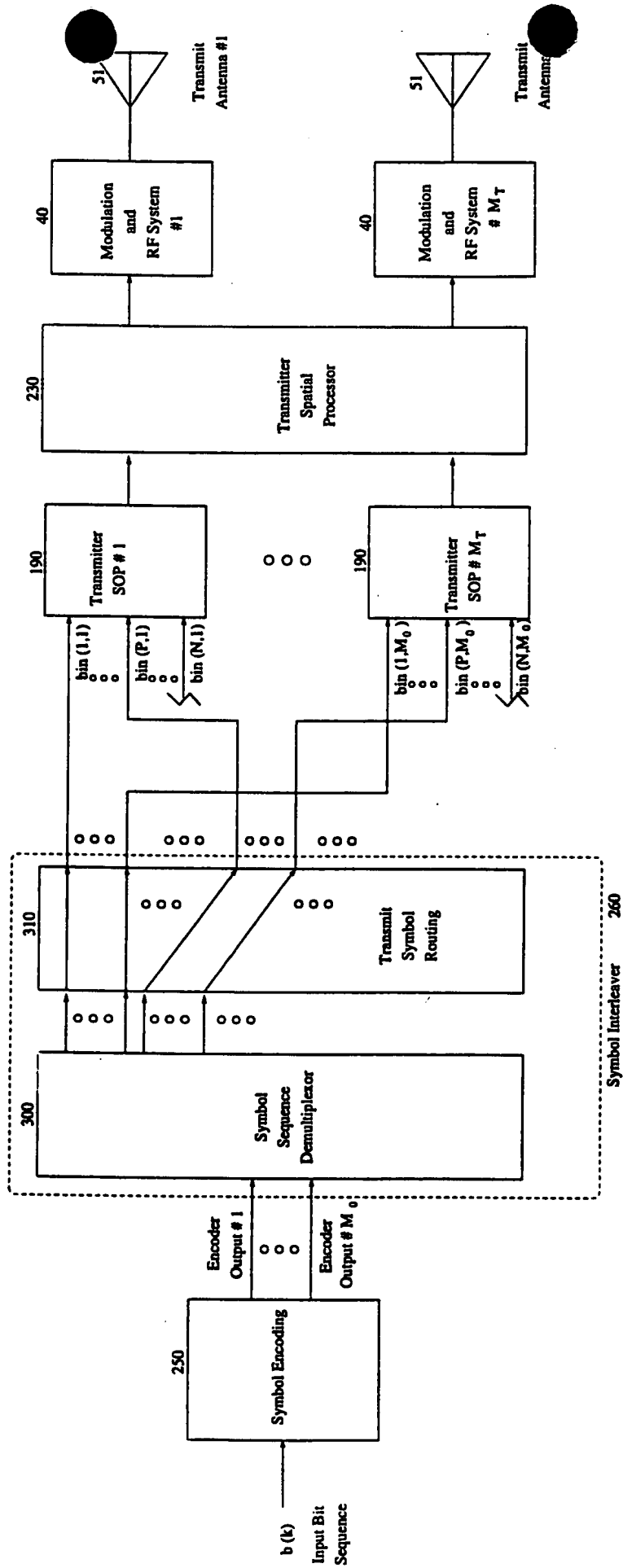


Fig. 24



FIG. 25 is a block diagram of a receiver system. The system includes a Channel ID block (130) and a Receiver Spatial Processor block (240). The Channel ID block (130) is connected to the Receiver Spatial Processor block (240). The Receiver Spatial Processor block (240) is connected to a Receiver SOP #1 block (200) and a Receiver SOP #M block (200). The Receiver SOP #1 block (200) is connected to a Demodulation and RF System #1 block (120). The Receiver SOP #M block (200) is connected to a Demodulation and RF System #M block (120). The Demodulation and RF System #1 block (120) is connected to a Receive Antenna #1 block (111). The Demodulation and RF System #M block (120) is connected to a Receive Antenna #M block (111). The Receiver Spatial Processor block (240) is also connected to a Symbol Deinterleaver block (270). The Symbol Deinterleaver block (270) is connected to a Symbol Sequence Multiplexor block (320) and a Receiver Symbol Router block (330). The Symbol Sequence Multiplexor block (320) is connected to a Symbol to Bit Decoder block (280). The Symbol to Bit Decoder block (280) is connected to an Output Bit Sequence block (b(k)).

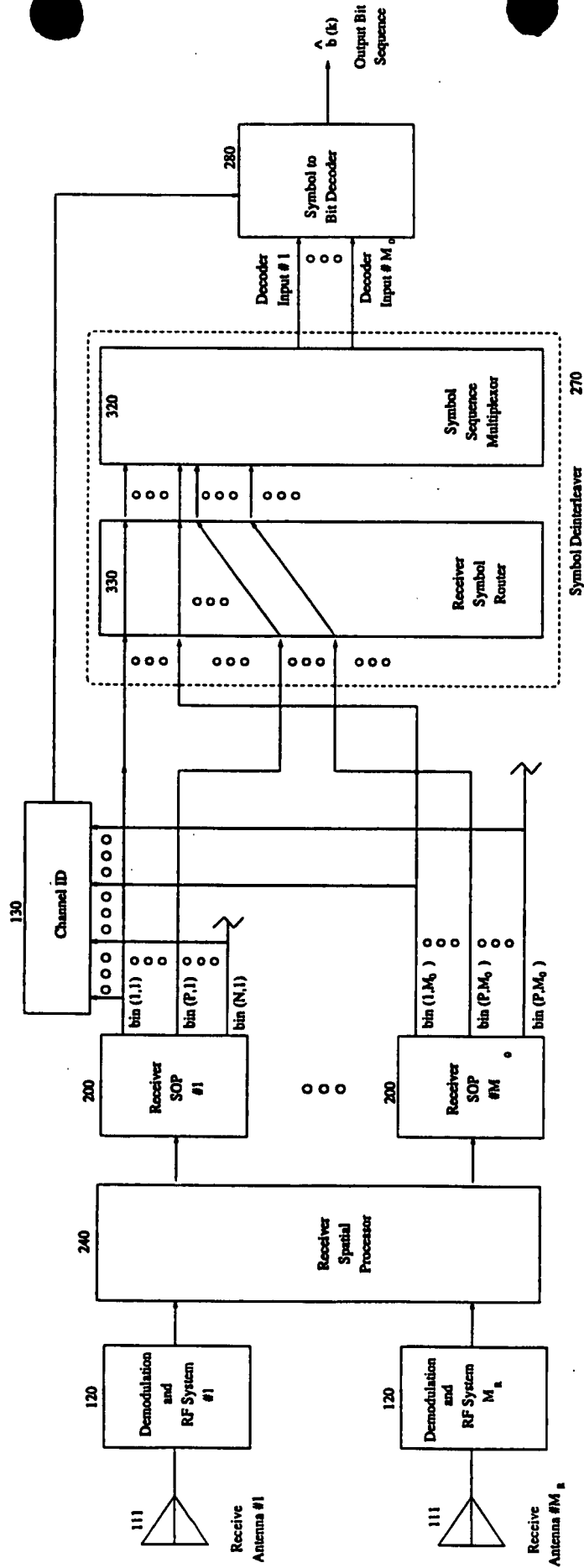


Fig. 25

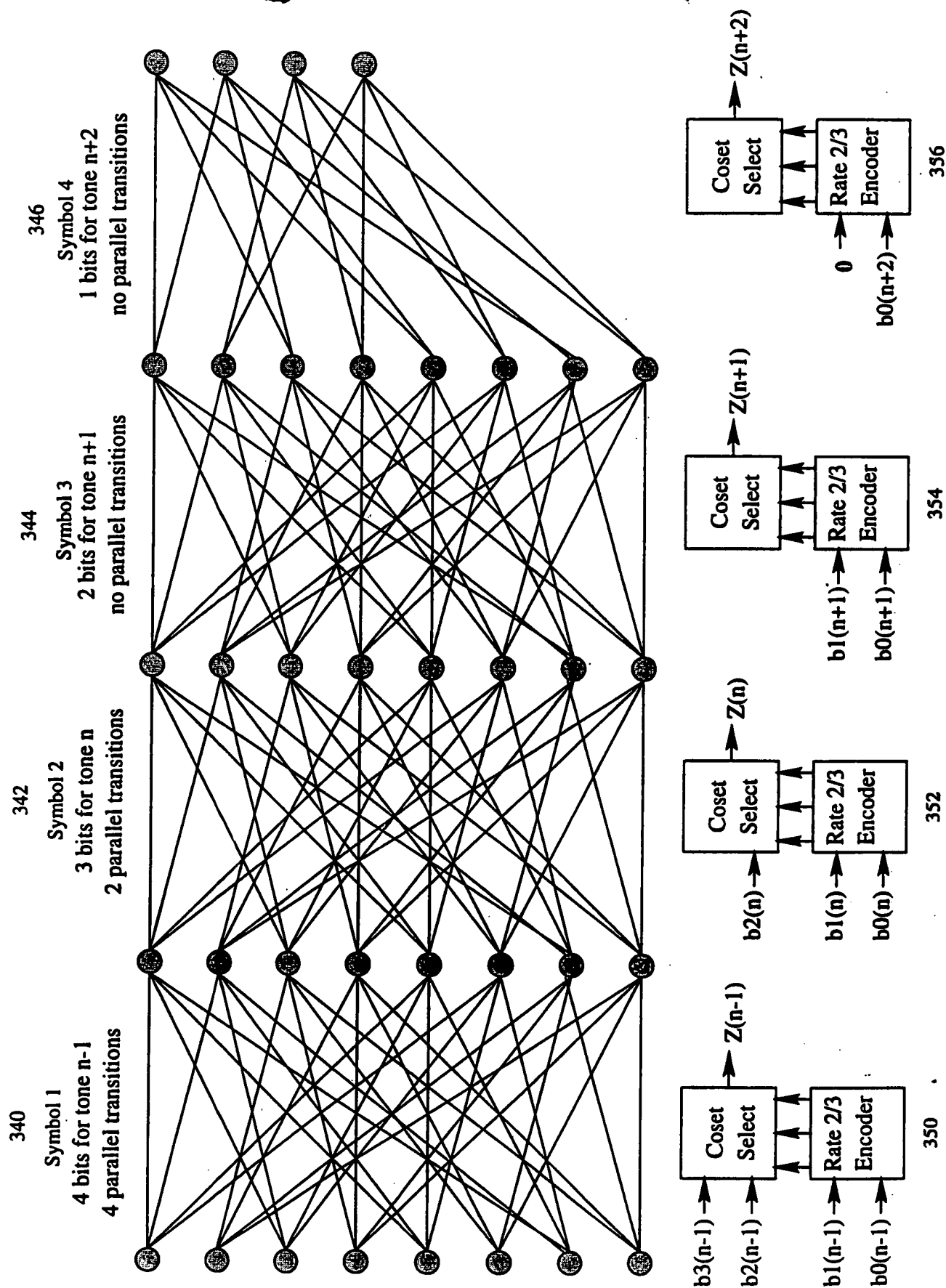


Fig. 26